

A NEW SPECIES OF THE ISOPOD-GENUS BATHYNOMUS.

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In the year 1877, A. Agassiz dredged at 955 fathoms, in the Gulf of Mexico, a gigantic Isopod, described by A. Milne-Edwards (Compt. Rend. Acad. Sc., t. 88, 1879, p. 21, and Annal. Magaz. Nat. Hist. (5) III., 1879, p. 241) as *Bathynomus giganteus*. Delineations of this form were subsequently published by Filhol (L'vie au fond des Mers, Paris, 1885, p. 147),¹ and by A. Agassiz (Three Cruises of the "Blake." Bull. Mus. Compar. Zool., Vol. XV., 1888, fig. 252.) Wood-Mason and Alcock made mention of the same species (Annal. Magaz. Nat. Hist. (6) VII., 1891, p. 270) taken by the "Investigator" in the Bay of Bengal at 740 fathoms. Lastly, Hansen (Det K. Dansk. Vidensk. Selsk. Skr. Nat. Math. Afd. (6), V. 3, 1890, pp. 252, 318, 378) pointed out the close resemblance to the family Cirolanidae, while Milne-Edwards proposed to place this genus in a new group or family, "*Cyathoadiens branchifères*." This latter opinion was adopted by Wood-Mason and Alcock in creating the family Bathynomidae.

After a careful examination of both opinions I believe Hansen's classification to be correct.

Bathynomus giganteus, which is remarkable, not only for its enormous size, but also for other morphological characters, was hitherto the only species of the genus. I describe herein a second species collected by L. Döderlein, during his sojourn in Tokio, Japan (1880-81), which, although smaller than the other, always attains dimensions unusual among the Isopoda. I propose to name the new species in honor of the discoverer, *Bathynomus döderleini*.

Diagnosis.—Body more slender than in *B. giganteus*, three times as long as broad (*B. giganteus* is not two-and-a-half times as long as broad). The last segment of the body (telson) is but little broader than long, its posterior margin is provided with seven spines, the middle one of which is the greatest. In the median line of the upper surface is a distinct longitudinal ridge. Both branches of the uropoda are pointed at the ends.

¹ I have only seen the copy in Marshall, Die Tiefsee und ihr Leben, 1888, p. 261, fig. 86.

Description.—Total length of the greater specimen 123 mm., breadth 42 mm., of the smaller 103 mm. and 36 mm. The whole upper surface finely granulated and punctured.

Frontal margin, in the middle, feebly sinuated, with a short process bent downwards. Eyes placed in the lower surface of the head, beneath the frontal margin, which is distinctly raised. Lamina frontalis equilaterally triangular, the angles rounded, the anterior meeting with the frontal process. Clypeus produced forward as a blunt, triangular projection, extending over the frontal margin so as to be visible from above, its longitudinal diameter greater than that of the labrum. The stalk of the antennulæ has three joints, the flagellum is about as long as the stalk, with nearly thirty joints. Stalk of the antennæ five-jointed, the first joint short and concealed. Flagellum in both specimens mutilated, the longest fragment has twenty-five joints, and reaches to the posterior margin of the first segment of the trunk.

Segments of the body finely punctured, the first as long as the head, the others considerably shorter, decreasing a little from before to behind. The first and second epimera nearly alike, not produced posteriorly, the four following posteriorly acutely produced, especially those of the fifth, sixth and seventh segments. The three anterior pairs of feet stout, second joint (see Hansen) not thickened, third longer than broad, fourth with the inner margin thorny, the process of its outer margin reaching to the middle of the sixth joint (but in the first pair of feet very short), sixth joint elongated and curved. The four following pairs of legs similar to each other, increasing in length. Second joint not remarkably thickened or enlarged. Third joint distally enlarged, the anterior margin with prickles, similar prickles at the anterior margin of the fourth and fifth joints. Sixth joint but little longer than the fifth, narrow.

Segments of the pleon evenly arched, the lateral angles of the second to fifth produced posteriorly and provided with a longitudinal ridge, those of the third segment longest. Pleopoda with roundish, almost equal branches, carrying at the hinder part of their bases the tufts of branchiæ characteristic of the genus, but since both are dried specimens the pleopoda and the branchiæ have become crumpled, and therefore it is impossible to give the details.

Last segment (telson) punctured and finely granulated, at the base but little larger than long, the lateral margins somewhat con-

verging posteriorly. Posterior margin truncated and provided with seven spines. The median line of this segment is occupied by a longitudinal keel, produced to the end of the middle spine of the posterior margin. This spine is somewhat longer than the others which are likewise somewhat unequal, on either side the second (from the middle outwards) being a little longer than the other laterals. Stem of the uropoda produced at the inner posterior angle, outer branch elongated, the margins nearly parallel, acuminate at the end. The inner branch almost triangular, acuminate posteriorly, longer than the outer, not looking over the telson. Both branches with several prickles at the margins.

The legs were originally covered with hair, but now are nearly worn bare because of the dry conservation. The hairs on the margins of the uropods and the telson are also preserved only here and there.

This species occurs on the Japanese coast, near Enoshima, Sagami Bay. The depth is not recorded; probably it lives associated with the famous Japanese Hexactinellidæ and Lithistidæ. The types belong to the Döderlein collections and are deposited in the museum of Strassburg, Germany.